Applicant: Richard M. Broglie et al. Attorney's Docket No.: 07148-025003 / CGL99/0008,

A015-00539.0006

Serial No.: 09/643,579 Filed: August 22, 2000

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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-22 (Canceled)

- 23. (Currently amended) A method for altering fatty acid composition increasing the oleic acid content in plant seeds, comprising the steps of:
- a) introducing a recombinant nucleic acid construct into a plant, said construct comprising at least one seed-specific regulatory sequence operably linked in sense orientation to a full length delta-12 fatty acid desaturase mutant gene coding sequence, wherein said sequence encodes a delta-12 fatty acid desaturase protein having a substitution of a Lys residue for (Asp/Glu) mutation is in a (Ala/Gly)His(Asp/Glu)CysGlyHis conserved sequence; and
- b) obtaining progeny from said plant, said progeny producing said seeds having an oleic acid content of from about 69% to about 90%
 - 24. (Canceled)
- 25. (Previously presented) The method of Claim 23, wherein said progeny produce seeds having a linoleic acid content of from about 1.0% to about 10.0%.
 - 26-28. (Canceled)
- 29. (Currently amended) A recombinant nucleic acid construct effective for decreasing linoleie increasing oleic acid content when expressed in seeds, said construct comprising at least one seed-specific regulatory sequence operably linked in sense orientation to a mutant delta-12 fatty acid desaturase coding sequence encoding a delta-12 fatty acid desaturase gene equivalent product having at least one mutation which renders said desaturase gene product non-functional, said mutation being the substitution of a Lys residue for X in a His-X-Cys-Y-His (SEQ ID NO:17) amino acid region, wherein X is selected from the group consisting of Asp and Glu and Y is selected from the group consisting of Gly and Ala.
 - 30-36. (Canceled)
- 37. (Currently amended) The method of Claim 23, wherein said mutation in said delta-12 fatty acid desaturase mutant gene is in a Ala-His-Glu-Cys-Gly-His conserved sequence.
 - 38. (Canceled)

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39. (Previously presented) The method of Claim 23, wherein said seeds have an oleic acid content of from about 74% to about 90%.

- 40. (Previously presented) The method of Claim 39, wherein said seeds have an oleic acid content of from about 80% to about 90%.
- 41. (Previously presented) The method of Claim 39, wherein said seeds have an oleic acid content of from about 75% to about 88%.
- 42. (Previously presented) The method of Claim 41, wherein said seeds have an oleic acid content of from about 80% to about 88%.
- 43. (Previously presented) The method of Claim 23, wherein said seeds have an α -linolenic acid content of from about 1.0% to about 10.0%.
- 44. (Previously presented) The method of Claim 25, wherein said seeds have a linoleic acid content of from about 1% to about 6%.
 - 45-48. (Canceled)
 - 49. (Previously presented) The method of claim 23, wherein said plant is soybean.
 - 50. (Previously presented) The method of claim 23, wherein said plant is rapeseed.
 - 51. (Previously presented) The method of claim 23, wherein said plant is cotton.
 - 52. (Previously presented) The method of claim 23, wherein said plant is corn.
 - 53. (Previously presented) The method of claim 23, wherein said plant is safflower.
- 54. (Previously presented) The method of claim 23, wherein said seed-specific regulatory sequence is a bean β -phaseolin promoter.
- 55. (Previously presented) The method of claim 23, wherein said seed-specific regulatory sequence is an α subunit of soybean β -conglycinin promoter.
- 56. (Previously presented) The method of claim 23, wherein said seed-specific regulatory sequence is maize 18 kd oleosin promoter.
- 57. (Previously presented) The method of claim 23, wherein said seed-specific regulatory sequence is maize 15 kd zein promoter.
- 58. (Previously presented) The method of claim 23, wherein said seed-specific regulatory sequence is a *Brassica* napin promoter.
 - 59. (Canceled)

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In the Drawings

Please substitute the enclosed four sheets of formal drawings for the originally filed drawings.